



Civil Engineering

**UNIT COMPLIANCE INSPECTION
CHECKLIST - OPERATIONS FLIGHT**

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This publication implements Air Force Policy Directive (AFPD) 32-10, *Installations and Facilities*. The Inspection Checklist is developed to support AFI 90-201, *Inspector General Activities*, and the USAFE Supplement 1, inspection programs. This checklist identifies compliance items that support guidance in the following: law, executive order, higher headquarters publication (Department of Defense (DoD), Federal Aviation Administration (FAA), Air Force Instruction (AFI), Air Force Manual (AFMAN), Air Force Technical Order (AFTO), etc.) and major command (MAJCOM) publications. It applies to all United States Air Forces in Europe (USAFE) Civil Engineer Operations Flights and members as indicated in paragraph 2. It does not apply to Air National Guard (ANG) or Air Force Reserve Command (AFRC) units. Units can supplement this publication to add internal compliance items. This checklist is intended for inspection use. Send comments and suggested improvements to this publication on AF IMT 847, **Recommendation for Change of Publication**, to Civil Engineer Division - Engineering (HQ USAFE/A7CC), Unit 3050 Box 10, APO AE 09094-5010. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, *Management of Records* and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at: <https://webrims.amc.af.mil>. Ensure that any local instructions or supplements are created in accordance with AFI 33-360 Volume 1, *Air Force Content Management Program-Publications*.

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1. General. The items listed do not constitute the order or limit the scope of the inspection or assessment. As a minimum, units should use the checklist in conjunction with the Unit Self-Assessment. The objective is to identify deficiencies that preclude attainment of required capabilities. Higher headquarters may use this checklist in whole or in part during visits or exercises.

1.1. Core Compliance Guide Items (CCGI) and Compliance Guide Items (CGI). Items identified by functional managers to prioritize command requirements and to allow the Inspector General (HQ USAFE/IG) inspectors to assess criticality of deficiencies.

1.1.1. CCGI. Items identified by HQ USAFE directorates and functional managers as key result areas for successful mission accomplishment including, but not limited to, items where non-compliance could result in serious injury, loss of life, excessive cost, litigation or affect system reliability. These requirements may be mandated by law, Executive Order, DoD directive, safety or Air Force and USAFE strategic plans. CCGIs are referred to as significant guide items requiring direct IG evaluation. Identify CCGIs by using uppercase and bold letters.

1.1.2. CGI. CGI are areas that require special vigilance and are important to the overall performance of the unit. Noncompliance could result in some negative impact on mission performance but is not likely to result in injury, unnecessary cost, or litigation. Identify CGIs by using standard sentence case.

2. Applicability. All items on this inspection checklist are assigned an applicability code designating to which type of unit the item applies. Applicability code 3 designates the following Main Operating Bases (MOB): Aviano, Incirlik, Lakenheath, Mildenhall, Ramstein, and Spangdahlem. Applicability Code 5 designates the following Munitions Support Squadrons (MUNSS): Buechel, Ghedi, Kleine Brogel and Volkel. Applicability code 7 designates the following Air Base Squadrons (ABS): Izmir, Fairford, Geilenkirchen, Molesworth, Alconbury, Upwood, Moron, Rhein Main, Stavanger, San Vito, Keflavik and Lajes. Applicability code 8 designates the following Communications sites: Croughton, Prum, Uxbridge. Applicability code 11 designates the following: Incirlik AB Liquid Fuels Maintenance work center. Applicability code 12 designates the following: Incirlik AB JSIIDS work center. Applicability code 13 designates the following: all units except for Moron ABS.

2.1. Forms/IMTs Adopted: AF IMT 9, **Request for Purchase**; AF IMT 55, **Employee Safety and Health Record**; AF IMT 103, **Base Civil Engineering Work Clearance Request**; AF IMT 172, **Tank Inspection Summary**; AF IMT 332, **Base Civil Engineer Work Request**; AF IMT 483, **Certificate Of Competency**; AF IMT 601, **Equipment Action Request**; AF IMT 623a, **On-The-Job Training Record - Continuation Sheet**; AF IMT 843, **Backflow Prevention Inspection Data**; AF IMT 844, **Backflow Prevention Inspection Data**; AF IMT 845, **Cross-Connection Information**; AF IMT 847, **Recommendation for Change of Publication**; AF IMT 848, **Inventory of Cross-Connection Control and Backflow Prevention Devices**; AF IMT 997, **Daily Well Activity Record**; AF IMT 1024, **Confined Spaces Entry Permit**; AF IMT 1460, **Water Utility Operating Log (Supplemental)**; AF IMT 1462, **Water Pollution Control Utility Operating Log**; AF IMT 2293, **U.S. Air Force Motor Vehicle Operator Identification Cards**; DD Form 1826, **Pest Control Certificate of Competency**; DD Form 1826-1, **Pesticide Applicator**; USAFE Form 300, **Aircraft Arresting System (AAS) Engagement/Missed Engagement Report**; DoT Form 15, **Corrosion Control-Rectifier Inspection**.

Table 1. Inspection Items for Operations Flight.

Item Number	Item	Reference	Applicability Code	Yes/No
1.	GENERAL			
1.1.	Does the flight operate, maintain, repair, and construct and demolish Air Force real property and real property installed equipment (RPIE) to accomplish the mission most economically, considering the total life cycle cost and the impact of facilities on the quality of life?	AFI 32-1001, Para 1.1.	3,7,8	
1.2.	Does the flight provide trained personnel to support Air Force operations worldwide?	AFI 32-1001, Para 1.2.	3,7,8	
1.3.	Has the flight established the capability to eliminate any emergency condition 24 hours a day?	AFI 32-1001, Para 1.3.	3,7,8	
1.4.	Does the flight conduct all activities in compliance with environmental, fire and safety laws, codes, and directives?	AFI 32-1001, Para 1.4.	3,7,8	
1.5.	Has the flight provided cost effective reliable utilities to meet readiness requirements, maintain quality of life, and satisfy installation needs?	AFI 32-1001, Para 1.5.	3,7,8	
1.6.	Are base support services provided to include: pest control, grounds maintenance, snow removal (where required) etc?	AFI 32-1001, Para 1.6.	3,7,8	
1.7.	Has the flight established quality standards and feedback mechanisms to measure performance in meeting customers' needs and mission requirements?	AFI 32-1001, Para 1.7.	3,7,8	
1.8.	Have plans been developed and updated annually, identifying major work requirements (roofing, pavements, protective coating, etc)?	AFI 32-1001, Para 1.9.	3,7,8	
1.9.	Have work plans been developed to effectively allocate in-service resource, including people, facilities, equipment, and vehicles, to meet the mission and customer needs?	AFI 32-1001, Para 1.10.	3,7,8	
1.10.	Does the flight provide customers with the costs of work or services provided on their facilities?	AFI 32-1001, Para 1.11.	3,7,8	
1.11.	After emergency and urgent work requirements are completed, is the Recurring Work Program (RWP) accomplished before other work requirements are accomplished?	AFPAM 32-1004V3, Para 1.3.4	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
1.12.	Is an effective facility manager program to include training customers on interfacing with Civil Engineer (CE) for facility requirements maintained?	AFI 32-1001, Para. 2.1.1.	3,7,8	
1.13.	Does the flight provide logistic support to acquire and manage CE supplies, tools, equipment, and vehicles? Includes all activities related to material acquisition, warehousing management, and the operation of the CE Supply Store and the base Self-Help Center?	AFI 32-1001 Para 2.1.5.	3,7,8	
1.14.	Are Work Control personnel using the automated systems such as Interim Work Information Management System (IWIMS) and Automated Civil Engineer System (ACES) to manage, control, program, and plan work requirements?	AFI 32-1001 Para 3.	3,7,8	
1.15.	Are planned work orders properly categorized/ funded?	AFI 32-1022, Para 3.2.	3,7,8	
1.16.	Does the Operations Flight track labor hours and costs to work orders and account codes?	AFI 32-1001, Para 3.2-3.3	3,7,8	
1.17.	Are AF IMTs 332, Base Civil Engineer Work Requests , coordinated with the appropriate agencies on work that requires civil engineer support?	AFI 32-1001 Para 6.	3,7,8	
1.18.	Does the BCE utilize AF IMT 103, Base Civil Engineer Work Clearance Request , for any work that may disrupt aircraft or vehicular traffic flow, base utility services, protection provided by fire or intrusion alarm systems, or routine activities of the installation?	AFI 32-1001, Para 6.6.	3,7,8	
1.19.	Does the BCE ensure AF IMT(s) 332 are coordinated with appropriate base agencies on work that requires BCE action to eliminate or correct hazards?	AFI 32-1001, Para 6.1.-6.5.	3,7,8	
1.20.	Does the Operations Flight Chief have proper approval authority to sign AF IMT(s) 332?	AFI 32-1001, Para 7.	3,7,8	
1.21.	Are the following priorities correctly used for planned work orders: (1) Mission, (2) Safeguard Life and Property, (3) Support, and (4) Necessary?	AFI 32-1001 Para 8.1.1. through 8.1.4.	3,7,8	
1.22.	Is work required to correct an emergency condition completed within 24 hours of notification?	AFI 32-1001, Para 8.2.1.	3,7,8	
1.23.	Is urgent work responded to and completed within 7 calendar days of receipt or within 5 workdays after receipt of material?	AFI 32-1001, Para 8.2.2	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
1.24.	Is routine work accomplished within 30 calendar days after identifying the requirement or receipt of material?	AFI 32-1001, Para 8.2.3.	3,7,8	
1.25.	Are change orders accomplished when any of the conditions exists that are described in paragraph 9.1.1. thru 9.1.3.?	AFI 32-1001 Para 9.1. through 9.1.3.	3,7,8	
1.26.	When work orders are canceled, are they canceled only by the same level of authority, or higher that approved the original document?	AFI 32-1001 Para 9.3.	3,7,8	
1.27.	Is the Recurring Work Program (RWP) being monitored on a daily basis? Does each shop or first line zone supervisor effectively manage it?	AFI 32-1001, Para 10.	3,7,8	
1.28.	Are all completed work orders that change facilities or utility systems sent to maintenance engineering to update the as-built drawings?	AFI 32-1001, Para 11.1.	3,7,8	
1.29.	Are planned work orders that change real property records (e.g., new construction, renovation, change in equipment type/capacity, or permanently installed equipment) forwarded to the Resources Flight so that real property records can be capitalized?	AFI 32-1001, Para 11.2.	3,7,8	
2.	TRAINING			
2.1.	Does the Operations Flight Commander ensure a viable training program exists to meet all training needs and requirements of the enlisted personnel within the flight as well as base and contingency requirements?	AFI 32-1001, Para. 2.1.	3,7,8	
2.2.	Have supervisors developed a Master Training Plan (MTP) to ensure 100 percent task coverage?	AFI 36-2201V3, Para 6.1.2.	3,7,8	
2.3.	Have supervisors conducted and documented work center training orientations within 60 days of assignment?	AFI 36-2201V3 Para 6.1.9.	3,7,8	
2.4.	Have supervisors conducted and documented (on AF Form 623a, On-The-Job Training Record – Continuation Sheet) an initial evaluation of newly assigned personnel on duty position knowledge and skills within 60 days of assignment?	AFI 36-2201V3 Para 6.1.11.	3,7,8	
2.5.	Have Career Development Courses (CDC) been administered according to AFI 36-2201V3, <i>Air Force Training Program on the Job Training Administration</i> , Chapter 9, Table 9.1.?	AFI 36-2201V3 Para 6.1.18. and Chapter 9	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
2.6.	Is a functional manager or lead craftsman assigned by Air Force Specialty Code (AFSC) to direct and oversee training in their respective area of expertise in accordance with AFPAM 32-1004V1, <i>Working in the Operations Flight – Functions and Organization</i> , Paragraph 9.3.1.	AFPAM 32-1004V1, Para 9.3.1.	3,7,8	
2.7.	Do functional managers maintain a list of all personnel in specialty E-1 through E-6 in upgrade training and oversee their training?	AFPAM 32-1004V1 Para. 9.3.1(1)	3,7,8	
2.8.	Do functional managers identify training limitations due to equipment non-availability?	AFPAM 32-1004V1, Para. 9.3.1.(5)	3,7,8	
3.	VEHICLES			
3.1.	Are all vehicles in the squadron fleet adequately managed?	AFPAM 32-1004V1, Para 4.2.	3,7,8	
3.2.	Does the element make sure all vehicles are assigned, reports prepared, and incidents investigated?	AFPAM 32-1004V1, Para. 4.2.	3,7,8	
3.3.	Are AF IMTs 2293, U.S. Air Force Motor Vehicle Operator Identification Cards , issued/ reissued/ validated according to AFI 24-301, <i>Vehicle Operations</i> , Paragraph 4.4.?	AFI 24-301, Para 4.4.1.1., 4.4.1.2., and 4.4.1.5.	3,7,8	
3.4.	Has the unit designated qualified operators as vehicle training instructors?	AFI 24-301, Para 4.5.3.	3,7,8	
3.5.	Has the unit commander ensured vehicle training lesson plans are developed, coordinated through the Vehicle Operations Officer/Vehicle Operations Superintendent (VOO/VOS), and on file?	AFI 24-301, Para 4.5.4.	3,7,8	
4.	ENERGY MANAGEMENT PROGRAM			
4.1.	Has the installation established an Energy Management Steering Group (EMSG) to coordinate all energy matters?	AFPD 23-3, Para 9.3.	3,7,8	
4.2.	Is the EMSG comprised of representatives from all major energy consuming activities who have the authority to make energy management decisions for their respective organizations?	AFPD 23-3, Para 10.6.	3,7,8	
4.3.	Is the EMSG chaired by the wing commander or a command echelon designee?	AFPD 23-3, Para 10.6.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
4.4.	Does the Installation conduct energy and water audits for approximately 10% of their facilities each year, either independently or through Energy Savings Performance Contracts?	Executive Order (E.O.) 13123, Part 4, Section 402	3,7,8	
4.5.	Does the Installation maximize their use of available alternative financing contracting mechanisms, including Energy Savings Performance Contracts (ESPC) and Utility Energy Efficiency Service Contracts when life-cycle cost effective?	E.O. 13123, Part 4, Section 403 (a)	3,7,8	
4.6.	Does the Installation select ENERGY STAR and other energy efficient products when acquiring energy-using products?	E.O. 13123, Part 4, Section 403 (b), (1)	3,7,8	
4.7.	Are there employee incentive programs in place to reward exceptional performance in meeting the goals outline in the Executive Order (EO) 13 123, <i>Greening Government Trough Efficient Energy Management</i> ?	E.O. 13123, Part 4, Section 406, (a)	3,7,8	
4.8.	Is water conservation an integral part of the Installations Utility Conservation Program?	E.O. 13123, part 4, Sections 207 and 503 (f)	3,7,8	
5.	DEFENSE UTILITY ENERGY REPORTING SYSTEM (DUERS)			
5.1.	Is a DUERS manager-assigned?	AFEPPM 96-3	3,7,8	
5.2.	Has the Energy Manager checked for mobility substitute exemptions (Centralized Aircraft Support Systems (CASS), Flight simulators, renewable energy sources, etc)?	AFEPPM 96-3	3,7,8	
5.3.	Does the square footage in the DUERS match the square footage in the real property records for all owned and leased facilities (Current Inventory Space Summary by Condition Code)?	AFEPPM 96-3	3,7,8	
5.4.	Are master meters calibrated regularly and records kept?	AFEPPM 96-3	3,7,8	
5.5.	Does the Base Energy Steering Group review the DUERS reports to assess progress toward the goal?	AFEPPM 96-3	3,7,8	
6.	MATERIAL ACQUISITION MANAGEMENT			
6.1.	Is the monthly consolidated inventory adjustment register signed by the Chief of Operations and the Chief of Logistics for all adjustment actions?	AFP 32-1004V4, Para 7.1.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
6.2.	Are all materials stored by BCE inventoried annually?	AFPAM 32-1004V4, Para 1.5.1. (4)	3,7,8	
6.3.	Are flammable/hazardous materials stored and maintained separately in storage areas?	DODR 4145.19.R-1, Para 2-102. (d)	3,7,8	
6.4.	Are Civil Engineer Material Acquisition System (CEMAS) store stock inventories scheduled by CEMAS end-of-session conducted daily and action taken to resolve discrepancies?	AFPAM 32-1004V4, Attachment 4	3,7,8	
6.5.	Has the Chief of Logistics initiated a program to correct inaccurate and/or incorrectly identified noun item records with Planning, Base Contracting, and applicable shop personnel?	AFPAM 32-1004V4, Chapter 5	3,7,8	
6.6.	Is the Identification File (IDF) listing current and has it been coordinated with the Work Information Management System (WIMS) system administrator? (It should be verified at least semiannually and updated as required). NOTE: Logistics should be reflected on the squadron out-processing checklist to ensure that individuals departing the squadron are deleted from the file.	AFPAM 32-1004V4, Attachment 4	3,7,8	
6.7.	Does the Chief of Logistics set the end-of-session frequency for CEMAS?	AFPAM 32-1004V4, Para 2.2.	3,7,8	
6.8.	Does the Chief of Logistics ensure that items coded for delete are in fact deleted (transfer balance, zero out, etc.)?	AFPAM 32-1004V4, Attachment 4	3,7,8	
6.9.	Has the Chief of Logistics taken action to ensure that completed Bills-of-Material (BOM) have valid holding area locations?	AFPAM 32-1004V4, Para 6.2.3. (3)	3,7,8	
6.10.	Is there a current list of building custodians, Military Family Housing (MFH) occupants, commanders, and First Sergeants available to ensure that unauthorized personnel are not issued material?	AFPAM 32-1004V4, Para 8.4.	3,7,8	
6.11.	Is the material documentation folder reviewed to ensure all required documents are on file prior to forwarding to Production Control?	AFPAM 32-1004V4, Para 6.2.6.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
6.12.	Are proper warehousing procedures being practiced and housekeeping standards maintained?	DODR 4145.19.R-1, Para 6-10. (8)	3,7,8	
6.13.	Are aisles clear of obstructions?	DODR 4145.19.R-1, Para 6-108., b13	3,7,8	
6.14.	Are bulk items properly stored?	DODR 4145.19.R-1, Para 6-109. (a)	3,7,8	
6.15.	Is all stored material properly located and labeled?	DODR 4145.19.R-1, Para 3-30. (4)	3,7,8	
6.16.	Are residue materials maintained beyond 365 days justified and documented in writing and signed by the BCE or his designated representative?	AFPAM 32-1004V4, Chapter 9	3,7,8	
6.17.	Does the material acquisition element accurately maintain the CE Material Acquisition System database?	AFPAM 32-1004V1, Para. 4.2.	3,7,8	
6.18.	Are CEMAS store stock inventories scheduled by CEMAS end-of-session conducted daily and action taken to resolve discrepancies?	AFPAM 32-1004V4, Para 7.1.	3,7,8	
6.19.	Does material acquisition notify shop supervisor or planning personnel when the BOM is 100% percent material complete?	AFPAM 32-1004V4, Para 6.2.3. (1)	3,7,8	
6.20.	Does the material acquisition element accurately maintain the CE Material Acquisition System database?	AFPAM 32-1004V1, Para. 4.2.	3,7,8	
7.	APPLIANCE MANAGEMENT			
7.1.	Does the BCE maintain an adequate level of appliances to provide timely response and minimum down time to customers?	AFI 32-1001, Para 13.1.	3,7,8	
7.2.	Are procedures established for tracking appliances, maintaining positive accountability, and providing a means to project future maintenance and procurement requirements?	AFI 32-6004, Para 4.3.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
8.	SELF HELP PROGRAM			
8.1.	Are real property records capitalized after completion of self-help work by using the Engineered Performance Standards (EPS) hours multiplied by the predominant shop rate?	AFI 32-1001, Para 11.2. and AFI 32-1098, Para 3.6.4.	3,7,8	
8.2.	Are store items reviewed to ensure there is at least an annual turnover of items or justification why they should be retained?	AFPAM 32-1098, Para 2.3.	3,7,8	
8.3.	Does the store stock materials that can be easily repaired and replaced by in-house civil engineering maintenance and repair personnel?	AFPAM 32-1098, Para 1.5.	3,7,8	
8.4.	Has a system (Self-help) been provided to customers so they may accomplish work requirements using their own resources such as labor, materials, equipment, or funds?	AFPAM 32-1001, Para 1.8.	3,7,8	
8.5.	Does the self-help store staff or designated representative visit on going self-help projects to ensure quality workmanship and provide help if required?	AFPAM 32-1098, Para 1.9.	3,7,8	
8.6.	Is base-wide commander emphasis evident through funding support and recognition programs?	AFPAM 32-1098, Para 1.2.	3,7,8	
8.7.	Is the Self Help Store material managed to ensure all accounting is accurate?	AFPAM 32-1004V1, Para. 4.2.	3,7,8	
8.8.	Are real property records capitalized after completion of self-help work by using the EPS hours multiplied by the predominant shop rate?	AFI 32-1001, Para 11.2. and AFPAM 32-1098, Para 3.6.4.	3,7,8	
9.	MAINTENANCE ENGINEERING			
9.1.	Has the squadron developed and annually updated future plans for major work requirements (roofing, pavements, protective coating, Heating, Ventilation and Air Conditioning (HVAC), RWP etc.)?	AFPAM 32-1004V2, Para 1.3.3.	3,7	
9.2.	Is the Operations Flight forwarding all completed work orders that change facility layouts to the Maintenance Engineer to update as-built drawings?	AFPAM 32-1004V2, Para 11.1.	3,7	

Item Number	Item	Reference	Applicability Code	Yes/No
9.3.	Do new construction and major renovation projects comply with design standards outlined in 10 CFR. Part 435, <i>Energy Performance Standards</i> ?	Engineering Tech Ltr 94-4, Para 4.1. and 10 CFR Part 435 Sections A-3.3; A-4.3; A-5.3; A-6.3; A-7.3; A-9.3; A-10.3	3,7	
9.4.	Has the installation established an Energy Management Steering Group to coordinate all energy matters?	AFPD 23-3, Para 1.9.3.	3,7,13	
9.5.	Is Executive Order 13 123 integral to the Installation's Energy Management Plan; is the guidance central to energy efficiency and water conservation practices, work designs, repairs or modifications of federal facilities?	Executive Order 13 123	3,7	
9.6.	Does the BCE periodically estimate utility requirements and prepare utility service specifications?	AFI 32-1061, Para 1.7.34.	3,7,13	
9.7.	Does the BCE make recommendations on the technical sufficiency and acceptability of utility rates, conditions, and technical provisions, and provide technical support to the Contracting Officer at all utility service negotiations?	AFI 32-1061, Para 1.7.45.	3,7,13	
9.8.	Does the BCE manage the technical aspects of the utility service contracts, including keeping a utility management brochure for each utility supplier?	AFI 32-1061, Para 1.7.65.	3,7,13	
9.9.	Does the BCE review all utility contracts annually?	AFI 32-1061, Para 1.7.56.	3,7,13	
9.10.	Does the BCE adequately budget for purchased utility services and manage the funds?	AFI 32-1061, Para 1.7.67.	3,7,13	
9.11.	Does the BCE inform the major command of proposed rate changes by regulated suppliers?	AFI 32-1061, Para 1.7.87.	3,7,13	
9.12.	Does the BCE adequately manage utility sales contracts and agreements, including those for reimbursable customers?	AFI 32-1061, Para 1.7.28.	3,7,13	
9.13.	Has the Chief of Maintenance Engineering developed a program to identify and prioritize repairs and alterations?	AFI 32-1068, Para 2.5.	3,7,8	
9.14.	Does the Chief of Maintenance Engineering perform life-cycle cost analyses to ensure least-cost methods?	AFI 32-1068, Para 2.5.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
9.15.	Has the BCE assigned a focal point for coordinating engineering, operations, real property, financial management, contracting and legal activities required to manage utility services?	AFI 32-1061, Para 1.7.1.	3,7,8	
9.16.	Does the BCE use load management technology and devices to economically manage loads?	AFI 32-1061, Para 1.7.23.	3,7,8	
9.17.	Do heating systems use the most cost-effective fuel, determined by life cycle cost analysis, using Energy Conservation Improvement Program (ECIP) Program discounted rates, fuel discounted rates, and life cycle cost analysis?	AFI 32-1068, Para 3.1.	3,7,8	
9.18.	Are major pavement requirements (Military Construction (MILCON), Operation and Maintenance O&M), North Atlantic Treaty Organization (NATO)) being identified, programmed, designed, and accomplished according to United States Air Force (USAF)/NATO STDs (especially airfield pavements)?	NATO 7th Edition, Criteria and Standards, UFC 3-260-1, UFC 3-130-03	3,7,8	
9.19.	Are airfield markings being performed according to ETL 04-2, <i>Standard Airfield Pavement Marking Schemes</i> or NATO STANAG 3609, <i>Standards for Maintenance of Fixed Aviation Fuel Receipt, Storage and Dispensing Systems</i> ?	ETL 04-2	3,7,8	
9.20.	How does the maintenance engineering staff provide engineering technical support to shop craftsman?	AFPAM 32-1004V1, Para. 2.2.	3,7,8	
9.21.	What process is used to ensure maintenance engineers meet regularly with craftsman in their discipline to discuss program considerations RWP, work orders in planning and in progress, engineering projects and work center concerns?	AFPAM 32-1004V1, Para. 2.2.	3,7,8	
9.22.	Do maintenance engineers support operations with engineering expertise to analyze field problems and identify solutions? Engineering expertise in the form of: > Utility Management > Non-Design drafting > Quality Assurance Evaluators	AFI 32-1001, Para 2.1.2.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
9.23.	Does maintenance engineering ensure projects are reviewed to ensure maintainability and reliability are included and/or considered?	AFI 32-1001, Para 2.1.2.; AFPAM 32-1004V1, Para. 2.2.	3,7,8	
9.24.	How do maintenance engineers manage the base infrastructure program?	AFI <u>32-1001</u> , Para 2.1.2.	3,7,8	
9.25.	How does maintenance engineering accomplish non-drafting design support?	AFI 32-1001, Para 2.1.2.	3,7,8	
9.26.	What process do maintenance engineers use to manage service and utility contracts?	AFI 32-1001, Para 2.1.2.	3,7,8	
9.27.	Does maintenance engineering perform work analysis and method improvement?	AFI 32-1001, Para 2.1.2.	3,7,8	
9.28.	Has the squadron developed a six-year long-range plan for major infrastructure work requirements (roofing, pavements, protective coating, HVAC, etc)?	AFPAM 32-1004V1 Para. 2.2	3,7,8	
9.29.	Does the long-range plan identify and prioritize repairs and alterations?	AFPAM 32-1004V1, Para 2.2.	3,7,8	
9.30.	Are completed work orders that change facility layouts being forwarded to Maintenance Engineering to update as-built drawings?	AFI 32-1001, Para 11.1.	3,7,8	
9.31.	Does maintenance engineering perform recurring work review?	AFI 32-1001, para 2.1.2.	3,7,8	
	INFRASTRUCTURE SUPPORT			
10.	SAFETY			
10.1.	Is applicable Occupational Safety and Health (OSH) guidance available for the workplace and operations personnel?	AFI 91-301, Para 2.14.1.	3,7,8	
10.2.	Do supervisors ensure all employees become familiar with the safety instructions in AFOSH Standard 91-501, <i>Air Force Consolidated Occupational Safety Standards</i> and AFOSH Standard 91-10, <i>Civil Engineering</i> ?	AFOSH STD 91-10, AFOSH STD 91-501	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
10.3.	Do supervisors utilize current Bioenvironmental Engineering Service (BES) baseline and annual industrial hygiene survey reports and use the BES reports to help train workers on occupational health hazards in the work place?	AFI 32-1067, Para 9.	3,7,8	
10.4.	Do supervisors train operating personnel on safety practices, controls, and personal protective equipment, and enforce their proper use at all times?	AFI 32-1067, Para 9.	3,7,8	
10.5.	Are personnel familiar with and comply with AFOSH Standard 91-25, <i>Confined Spaces</i> ?	AFOSH STD 91-25	3,7,8	
10.6.	Is safety continuously monitored and is there an education and training program to emphasize the importance of safety in the work place?	AFPAM 32-1004 V1, Chapter 10	3,7,8	
10.7.	Have individuals in supervisory positions attended the Supervisors Safety Training Course? AFI 91-301, <i>Air Force Occupational and Environmental Safety, Fire Protection and Health (AFOSH) Program</i> ?	AFI 91-301, Para 7.2.	3,7,8	
10.8.	Do supervisors share responsibility with commanders, functional managers and workers for preventing damage and injury while reflecting a positive attitude toward safety?	AFI 91-202, Para 1.3.1.	3,7,8	
10.9.	Are monthly safety briefings for personnel being conducted and documented?	AFI 91-202, Para 5.4.2.	3,7,8	
10.10.	Is job environment being monitored for hazards and are hazards reported promptly for abatement?	AFI 91-301, Para 2.14.4.	3,7,8	
10.11.	Is job safety training outlines being developed for assigned work areas?	AFI 91-202, Para 1.6.14.7.	3,7,8	
10.12.	Are supervisors Conducting Job Safety and Occupational Health Training for each newly assigned worker? Is additional training given if required by a change in assignment, equipment, procedures, processes, or standards? Are workers trained/ briefed on mandatory items listed in AFI 91-301, Attachment 5 and documented on AF IMT 55, Employee Safety and Health Record ?	AFI 91-301, Para 7.3. and Attachment 5.	3,7,8	
10.13.	Are mishaps and subsequent employee absences that occur in the work area immediately reported to the supporting safety office? Has civilian personnel been notified if a mishap involves a civilian employee?	AFI 91-202, Para 1.6.14.9.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
10.14.	Has newcomer's orientation to personnel under the age of 26 within 30 days of arrival been conducted and documented?	AFI 91-202, Para 1.6.13.7.	3,7,8	
10.15.	Are supervisors providing pre-departure safety briefings to military personnel, under the age of 26, before departing on leave, Temporary Duty (TDY), or Permanent Change of Station (PCS)?	AFI 91-202, Para 1.6.13.8.	3,7,8	
11.	POWER PRODUCTION			
11.1.	Are engine driven generator sets exercised for one continuous hour each month?	AFI 32-1063, Para 7.1.1.	3,7,8	
11.2.	Are all generators accounted for on Real Property Records for Real Property Installed Equipment (RPIE) and the Custodian Authorization/Custody Receipt Listing (CA/CRL) for Equipment Authorization Inventory Data/Document (EAID)?	AFI 32-1063, Para 3.1. & 3.2.	3,7,8	
11.3.	Is an annual inventory of all emergency generators prepared and submitted to Engineering and Operations (HQ USAFE/A7CCE) by December of each calendar year?	AFI 32-1063, Para 1.7.	3,7,8	
11.4.	Are personnel familiar with and comply with AFOSH Standard 91-25?	AFI 32-1067, Para 9.	3,7,8	
11.5.	Have operating procedures, emergency stopping procedures, and environmental permit restrictions been developed, posted, and reviewed and updated at least annually?	AFI 32-1062, Para 4.4.	3,7,8	
11.6.	Have detailed electrical and mechanical single-line diagram drawings been developed and maintained? Are copies of those diagrams posted for personnel to use?	AFI 32-1062, Para 4.3.1. and 4.3.2.	3,7,8	
11.7.	Are EAID generators annually exercised while connected to the facility or system it primarily supports? Do these facilities have a quick disconnect switch installed in sight of the generator?	AFI 32-1063, Para 7.2.	3,7,8	
11.8.	Are engine driven generator sets exercised under actual load each month for 1-continuous hour after the unit reaches operating temperature? If power demand is under 25 percent, is a sacrificial loadbank utilized in support of specific maintenance actions?	AFI 32-1063, Para 7.1.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
11.9.	Are all generators identified as RPIE or EAID to ensure accountability and control on Real Property Record or CA/CRL equipment account?	AFI 32-1063, Para 3., 3.1., and 3.2.	3,7,8	
11.10.	Is the power generation equipment operated and maintained in an efficient and cost-effective manner following the manufacturer's technical information and recommendations to include the minimum requirements established in attachments?	AFI 32-1062, Para 1.1., and Para 6. & 7.	3,7,8	
11.11.	Are operation logs, and maintenance and historical records maintained and analyzed to ensure the mission receives support and that equipment follows minimum life cycle cost trends?	AFI 32-1062, Para 5.	3,7,8	
11.12.	Is a complete set of technical orders or manufacturer's operation and maintenance manuals for each make and model of engine available?	AFI 32-1062, Para 4.1.	3,7,8	
11.13.	Are emergency generators used to support only authorized essential functions, per MIL-HNBK-1190B, <i>Facility Planning and Design Guide</i> ?	AFI 32-1063, Para 5.	3,7,8	
11.14.	Is training through government and private industry training schools and seminars provided?	AFI 32-1062, Para 3.	3,7,8	
11.15.	Does the generator operate at 25 percent of its capacity and has actions been taken to correct deficiency?	AFI 32-1063, Para 1.7. and 4.	3,7,8	
11.16.	Are tools, equipment, and instruments authorized in applicable Table of Allowances accounted for on the CA/CRL equipment account?	AFI 32-1062, Para 11.	3,7,8	
11.17.	Is an adequate supply of materials and repair parts established and maintained either on bench stock, supply point, or special level?	AFI 32-1062, Para 12.	3,7,8	
11.18.	Are users trained annually or more often as required? Is the training verified?	AFI 32-1063, Para 1.10.	3,7,8	
12.	AIRCRAFT ARRESTING SYSTEM (AAS)			
12.1.	ARE THE AIRCRAFT ARRESTING SYSTEM (AAS) CREWS CERTIFIED? (FOR AUGMENT PERSONNEL ONLY, 3E0X2 PERSONNEL DO NOT REQUIRE AF IMT 483, CERTIFICATE OF COMPETENCY).	AFI 32-1043, Technical Order 35EI-2-1-101	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
12.2.	Are engagements and missed engagements reported via phone to Command Aircraft Arresting System Depot (38 CTS/CEXD), followed by completed USAFE IMT 300, Aircraft Arresting System (AAS) Engagement/Missed Engagement Report?	USAFEI 32-1001, Para 14.11.	3,7,8	
12.3.	Are all AAS installations, operation, maintenance and inspection actions in compliance with AFI 32-1043, <i>Managing, Operating, and Maintaining Aircraft Arresting Systems</i> and 35E8-series T.O.?	AFI 32-1043, Para 1.3.3.3.	3,7,8	
12.4.	Are records maintained on each AAS (Daily, Weekly, Monthly, Semi-Annual Inspections; Brake and Tape Data, Cable Replacement Data, Annual Certification of Equipment and Personnel; Engagement Records)?	AFI 32-1043, Para 1.3.3.4.	3,7,8	
12.5.	Are all deviations to the applicable AFIs and 35E8-series T.O.'s covered by waivers? Are Non-Standard configurations approved by HQ USAFE/A7CC and Directorate of Air and Space Operations, Stan/Eval (HQ USAFE/A3TV)?	AFI 32-1043, Para 1.3.3.1. and 2.4.	3,7,8	
12.6.	Have aircraft arrestment reports including missed engagement attempts been submitted to Civil engineer Division (HQ AFCESA/CESC)?	AFI 32-1043, Para 1.3.3.7.	3,7,8	
12.7.	Have all BAK-9 and BAK-12 AAS had an engagement or certification within the last 12 months?	AFI 32-1043, Para 2.3.1.	3,7,8	
12.8.	Is a record of the effective pendant height (EPH) maintained for each AAS?	AFI 32-1043, Para 1.3.3.10.	3,7,8	
12.9.	Are local coordination procedures or instructions written to clearly delineate responsibilities of all personnel engaged in Aircraft Arresting System (AAS) activities during and after normal duty hours? Do these instructions define the roles of power production and fire protection personnel involved during emergencies? Has a snow and ice removal plan been properly addressed where AAS are utilized? Has the BCE approved the operating instruction? Has MAJCOM been provided a copy of the instruction?	AFI 32-1043, Para 1.3.3.5.; AFI 32-1002	3,7,8	
12.10.	Has the BCE and AAS Maintenance Supervisor ensured an AF IMT 601, Equipment Action Request has been submitted through appropriate channels to obtain authorization for any new AAS?	AFI 32-1043, Para 1.3.2. and 1.3.3.2.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
12.11.	Are personnel who maintain AAS task qualified?	AFI 32-1043, Para 1.3.1	3,7,8	
12.12.	Are local procedures developed to train each person who uses, operates, and maintains the AAS? Is quarterly training provided? Is the training documented?	AFI 32-1043, Para 1.3.3.5. and 1.3.3.8.2.	3,7,8	
13.	LIQUID FUELS MAINTENANCE			
13.1.	Have required personnel been trained in confined space entry procedures?	AFOSH 91-25	3	
13.2.	HAVE TANK ENTRY PERSONNEL BEEN RESPIRATOR FIT TESTED?	AFOSH 48-1, Para 6.2.3.	3	
13.3.	Is annual confined space rescue training documented?	AFOSH STD 91-25	3	
13.4.	Has the lower explosive limit (LEL) meter been calibrated and documented within the last 12 months?	Original Manufacturer's Brochure, AFOSH Standard 91-25	3	
13.5.	Does the Liquid Fuels Maintenance (LFM) shop have results of recent hydrostatic tests (pipelines)?	UFC 3-460-03, Page 12, Para 2.3.3., NATO STANAG 3609	3	
13.6.	Are results of hydrostatic tests forwarded to the command fuels engineer?	UFC 3-460-03, Page 12, Para 2.3.3., NATO STANAG 3609	3	
13.7.	Does the Base Liquid Fuels maintenance shop have a MAJCOM appointed tank-cleaning supervisor?	UFC 3-460-03, Page 114, Para 11.3., NATO STANAG 3609	3	
13.8.	Does the shop maintain records and drawings of all modifications made to any part of the Petroleum, Oils and Lubricants (POL) system, to include storage tanks?	NATO STANAG 3609, UFC 03-460-03	3	
13.9.	Has the LFM shop tested/checked the high-level control valves on all storage tanks and annotated the results semi-annually?	UFC 3-460-03, Page 102, Table 10.1., NATO STANAG 3609	3	

Item Number	Item	Reference	Applicability Code	Yes/No
13.10.	Has the LFM shop calibrated the jet fuel meters?	UFC 3-460-03, Page 108, Para 10.3.12., NATO STANAG 3609	3	
13.11.	Are all AF IMT 172, Tank Inspection Summary , forwarded to the MAJCOM fuels engineer?	UFC 03-460-03, NATO STANAG 3609	3	
13.12.	Does the LFM shop maintain facility files? Include copies of completed AF IMT 1024, Confined Spaces Entry Permit , AF IMT 172, hot work permits, strapping charts, waivers, and hose hydrostatic test records.	UFC 3-460-03 Para 1.2.3.10.1., NATO STANAG 3609	3	
13.13.	Does the LFM shop maintain shop personnel files (health records, respirator fit-test record, training records)?	UFC 3-460-03 Para 1.2.3.10.2	3	
13.14.	Does the LFM shop maintain O&M manuals?	UFC 3-460-03 Para 1.2.3.10.3., NATO STANAG 3609	3	
13.15.	Does the LFM shop maintain current system schematics and as-built drawings?	UFC 3-460-03 Para 1.2.3.10.4., NATO STANAG 3609	3	
13.16.	Does the LFM shop maintain regulations and manuals (Occupational Safety and Health Administration [OSHA], Air Force Occupational and Environmental Safety, Fire Protection, and Health Program (AFOSH), American Petroleum Institute Standards [API Std], MIL-HDBK-1022A, <i>Petroleum Fuel Facility</i>), NATO STANAG 3609, MAJCOM infrastructure assessment reports?	UFC 3-460-03, Para 1.2.3.10.	3	
13.17.	Does the LFM shop recurring work program (RWP)?	UFC 3-460-03, Para 1.2.3.10.6.	3	
13.18.	Does the LFM shop maintain Contractor inspection records (e.g., API 570, <i>Piping Inspection Code: Inspecting, Repair, Alteration, and Rerating of In-service Piping System</i> , API Std 653, <i>Tank Inspection Repair, Alteration, and Reconstruction</i> , and leak detection reports)?	UFC 3-460-03, Para 1.2.3.10.7., NATO STANAG 3609	3	

Item Number	Item	Reference	Applicability Code	Yes/No
13.19.	Does the LFM shop maintain inspection schedules and cathodic protection records?	UFC 3-460-03, Para 1.2.3.10.9., NATO STANAG 3609	3	
13.20.	Is the LFM shop foreman familiar with operator maintenance requirements and does he or she verify that work was performed properly according to T.O. 37-1-1, <i>General Operations and Inspections of Installed Fuel Storage and Dispensing Systems</i> ?	T.O. 37-1-1 and UFC 3-460-03, Para, 10.2.2.	3	
13.21.	Does the LFM shop foreman and the Fuels Management Flight (FMF) commander or designated representative, at least once per month inspect all petroleum fuel systems and verify that discrepancies are correctly annotated and have work order numbers assigned?	T.O. 37-1-1, Para 9a. and UFC 3-460-03, Para 10.2.3.	3	
13.22.	Is the LFM foreman or representative certified to perform the duties of a Tank Entry Supervisor (TES)? Does the TES have an AF IMT 483 card issued by the MAJCOM fuels engineer?	UFC 3-460-03, Para 11.3. thru 11.3.3.	3	
14.	ELECTRICAL SYSTEMS			
14.1.	HAVE ELECTRICAL PERSONNEL COMPLETED ANNUAL CARDIOPULMONARY RESUSCITATION (CPR) TRAINING?	AFI 32-1064, Para 2.13.	3,7,8	
14.2.	Are personnel familiar with and comply with AFOSH Standard 91-25?	AFOSH STD 91-25	3,7,8	
14.3.	Are personnel trained to comply with AFOSH standards, National Electrical Code, National Electrical Safety Code, and host nation codes?	AFI 32-1064, Para 2.10.	3,7,8	
14.4.	Is there a published squadron directive or operating instruction for the corrosion program?	AFI 32-1054, Para 3.5.2.	3,7,8	
14.5.	Has the BCE established an active Corrosion Control Program? Has the BCE established an active Corrosion Control Program?	AFI 32-1054, Para 3.5.1.	3,7,8,11	
14.6.	Does the base have personnel trained to perform Cathodic Protection tests?	AFI 30-1054, Para 3.5.1.	3,7,8,11	
14.7.	Are records being maintained for Cathodic Protection and Water Tank Calibration?	AFI 32-1054, Para 5.	3,7,8,11	

Item Number	Item	Reference	Applicability Code	Yes/No
14.8.	Are all meters and test instruments operational and properly calibrated by Test Measurement and Diagnostic Equipment (TMDE)?	Applicable manufacturer's guidelines, PMEL regulations or T.O. 33K-1-100-CD-1	3,7,8	
14.9.	Have rubber gloves been dielectrically tested? Is the date of test stamped/stenciled on each glove or recorded in a log?	AFI 32-1064, Para 2.11. and AFOSH STD 91-501	3,7,8	
14.10.	ARE DETAILED, UP-TO-DATE, AND ACCURATE ELECTRICAL DISTRIBUTION SYSTEM ONE-LINES POSTED WHERE APPLICABLE?	AFOSHSTD 91-10, Para 11.1.4.	3,7,8	
14.11.	Is information on electrical power systems accurate and up-to-date?	AFI 32-1063, Para 1.8.	3,7,8	
14.12.	Are underground fuel storage tanks equipped with cathodic protection? (excluding cut and cover tanks)	CFR 40-280/281, AFI 32-1054, Para 4.2.1.	3,11	
15.	GROUNDING AND LIGHTNING PROTECTION SYSTEMS (LPS)			
15.1.	Are lightning protection and grounding systems properly maintained?	AFI 32-1065, Table 1; and AFI 32-1065 USAFE Sup 1, Table 2, Para 1.1.3.1.	3,7,8	
15.2.	Are lightning protection and facility grounding systems being tested and maintained at proper intervals?	AFI 32-1065, Table 1.	3,7,8	
15.3.	Are inspections and test records being properly maintained?	AFI 32-1065, Para 4.1.	3,7,8	
15.4.	Are grounding records being reviewed and analyzed for deficiencies and undesirable trends?	AFI 32-1065, Para 4.2.	3,7,8	
15.5.	Have operating instructions or other documented procedures been developed for testing grounds?	AFI 32-1065, Para 7.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
15.6.	If lightning protection systems, other than types prescribed, are used, do they offer equivalent protection?	AFMAN 91-201, Para 2.54.	3,7,8	
15.7.	Do lightning protection systems (LPS) comply with NFPA 780, <i>Standards of the Installation of Lightning Protection Systems</i> , NFPA 70, <i>The National Electric Code</i> , reference (1) MIL-HDBK-419, <i>Grounding, Bonding and Shielding for Electronic Equipments and Facilities</i> ?	AFMAN 91-201, Para 2.54.	3,7,8	
15.8.	Is there an LPS on facilities including open pads, revetments and modules, ammunition, explosives ingredients etc., unless exempted by regulation?	AFMAN 91-201, Para 2.54.	3,7,8	
15.9.	Does the LPS feature air terminals, low impedance paths to ground, sideflash protection, surge suppression of all conductive penetrations into the protected area, and earth electrode systems. Structural elements of the building may serve as air terminals, down conductors, or the earth electrode?	AFMAN 91-201, Para 2.54.	3,7,8	
15.10.	Is lightning protection properly maintained for ammunition and explosives facilities?	AFMAN 91-201, Para 2.54.	3,7,8	
15.11.	Is LPS used to protect DoD ammunition designed to intercept lightning at a 100 ft or less striking distance arc in accordance with NFPA 780, Appendix K?	AFMAN 91-201, Para 2.54.	3,7,8	
15.12.	Is the LPS periodically inspected (visually)? Inspections shall be conducted annually?	AFI 32-1065, Table 1., Column 12.	3,7,8	
15.13.	Is the lightning protection systems periodically tested electrically as specified in AFI 32-1065, <i>Grounding Systems</i> ? Electrical testing shall be accomplished at least every 24 mos.	AFI 32-1065, Table 1., Column 12.	3,7,8	
15.14.	Do users maintain copies of all LPS inspection records pertaining to their facilities?	AFM 91-201	3,7,8	
15.15.	Are bonding and resistance to earth tests conducted periodically (or after completion of facility modification that may affect bonding)? A maximum resistance value of one ohm is permitted across all bonds.	AFI 32-1065, Section B, Item 8	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
15.16.	Are records of resistance to earth tests kept on file for the last six inspection cycles?	AFI 32-1065, Section A, Item 4.3.	3,7,8	
15.17.	Are personnel responsible for maintenance, inspection and testing familiar with the fundamentals described in NFPA 780, Appendix K, and herein as they relate to explosive facilities?	AFI 32-1065, Section A, Item 6.	3,7,8	
15.18.	Are air terminals omitted on earth-covered igloos constructed according to approved definitive drawings, unless the structures qualify as a "hazardous location"?	AFMAN 91-201, Para 2.46.	3,7,8	
15.19.	When air terminals are removed, are the steel arch and/or reinforcing bars electrically bonded between structural elements and connected to the grounding system?		3,7,8	
16.	ALARMS			
16.1.	Are Joint Services Interior Intrusion Detection Systems (JSIIDS) in the recurring work program and inspections being performed according to T.O. 31S9-series? (T.O. is N/A where Vindicator has been installed)	USAFEI 32-1003, Para 2.2.3.	3,7,8,12	
16.2.	Are records of inspections, maintenance and repairs maintained at the unit?	USAFEI 32-1003, Para 2.2.4.	3,7,8,12	
16.3.	Are Intrusion Detection Systems (IDS) in the recurring work program and inspections being performed according to applicable reference material (Vindicator)?	Applicable Reference Material (Vindicator)	3,7,8	
17.	VISUAL AIR NAVIGATION SYSTEMS			
17.1.	Are required visual aids installed for the appropriate operational requirement?	AFI 32-1044, Para 7.1.	3,7,8	
17.2.	Have waivers been obtained for non-standard installations?	AFI 32-1044, Para 8.	3,7,8	
17.3.	Are preventive maintenance inspections of visual aid equipment being conducted at recommended intervals (daily, weekly, monthly, bi-monthly, quarterly, etc)?	MIL-HDBK 1023/4	3,7,8	
18.	MECHANICAL - HEATING SYSTEMS			
18.1.	Has the BCE appointed an engineer or appropriate supervisor to interpret and ensure compliance with applicable codes and Federal law?	AFI 32-1068, Para 2.3.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
18.2.	Does the Chief of Operations control the fuel supplies according to AFI 32-1068, <i>Heating Systems and Unified Pressure Vessels</i> , Para 3.2. and 3.3.?	AFI 32-1068, Para 2.4.	3,7,8	
18.3.	Has the Chief of Operations developed a steam trap maintenance schedule?	AFI 32-1068, Para 2.4.	3,7,8	
18.4.	Has the Chief of Operations developed schedules for inspection and testing of heating systems and unfired pressure vessels and ensures equipment is reliable and safe?	AFI 32-1068, Para 2.4.	3,7,8	
18.5.	Does the Chief of Operations process and post inspection reports, and reports test results to MAJCOM?	AFI 32-1068, Para 2.4.	3,7,8	
18.6.	Has the Chief of Operations assigned properly trained, experienced personnel to operate and maintain the heating plants?	AFI 32-1068, Para 2.4.	3,7,8	
18.7.	Does the Chief of Operations maintain operating logs and records of repairs to boilers, and send them to MAJCOM as required?	AFI 32-1068, Para 2.4., 3.5.2.	3,7,8	
18.8.	Has the Chief of Operations established a program to measure systems performance and make continuous improvements (metrics established)?	AFI 32-1068, Para 2.4.	3,7,8	
18.9.	Does the Chief of Operations ensure systems effluents conform to applicable standards?	AFI 32-1068, Para 2.4.	3,7,8	
19.	HVAC SYSTEMS			
19.1.	Has the Chief of Operations provided certification training to all refrigerant maintenance personnel on maintenance of refrigeration equipment and handling of ozone depleting substances?	1995 DoD EPA Universal Certification Program Workbook, Page 6-7	3,7,8	
19.2.	Are fuel suitability, availability, environmental impact, reliability, and maintainability considered for fuel conversions?	AFI 32-1068, Para 3.1.	3,7,8	
19.3.	Has the Chief of Operations developed a Refrigeration Management Plan?	AFI 32-7086, Para 4.7.3.	3,7,8	
19.4.	IS HVAC EQUIPMENT INCLUDED IN THE RWP TO PREVENT BREAKDOWN OF CRITICAL EQUIPMENT OR FACILITIES?	AFI 32-1001 Para 10.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
19.5.	ARE LIFECYCLE COST ANALYSES, LOW REPLACEMENT COST, AND AVAILABILITY OF MANPOWER METHODS USED TO DETERMINE WHICH EQUIPMENT IS INCLUDED IN THE RWP?	AFPAM 32-1004V2, Para 8.2.	3,7,8	
19.6.	ARE INEXPENSIVE, NON-CRITICAL ITEMS (PUMPS, FANS ETC.) EVALUATED AGAINST THEIR LONG-TERM COSTS ASSOCIATED WITH PREVENTATIVE MAINTENANCE (PM)?	AFPAM 32-1004V2, Para 8.2.	3,7,8	
20.	REFRIGERANT MANAGEMENT			
20.1.	Does the Refrigerant Manager maintain copies of all service invoices for any service, maintenance, repair or disposal performed on appliances at the facility on or after July 1 1992?	Section 114 (a) (1) of the Clean Air Act, 42 U.S.C. Section 7414 (a) (1)	3,7,8	
20.2.	Does the Refrigerant Manager maintain records indicating the number of appliances serviced, maintained, repaired, or disposed of at the facility on or after 1 July 1992?	Section 114 (a) (1) of the Clean Air Act, 42 U.S.C. Section 7414 (a) (1)	3,7,8	
20.3.	Does the Refrigerant Manager maintain records indicating the amount of refrigerant consumed during service, maintenance, repair or disposal of any appliances at the facility on or after 1 July 1992?	Section 114 (a) (1) of the Clean Air Act, 42 U.S.C. Section 7414 (a) (1)	3,7,8	
20.4.	Does the Refrigerant Manager maintain records indicating the type of equipment used to recover, recycle, or reclaim refrigerants contained in appliances during the service, maintenance, repair, or disposal of any appliances at the facility on or after 1 July 1992?	Section 114 (a) (1) of the Clean Air Act, 42 U.S.C. Section 7414 (a) (1)	3,7,8	
20.5.	Are leaks exceeding established leak rates repaired in accordance with established time schedules?	AF Refrigerant Management Program Handbook 2.2.1.6. thru 2.2.2.	3,7,8	
20.6.	Is the Refrigerant Manager reducing Ozone Depleting Substances (ODS) according to the goals outlined in AFI 32-7086, <i>Hazardous Materials Management</i> ?	AFI 32-7086, Para 4.1.2.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
21.	BOILER FIRED PRESSURE VESSEL INSPECTION			
21.1.	Does a certified inspector twice per year inspect all high-pressure steam (above 103 kPa [15 psig] and High Temperature Water (HTW) (above 1103 kPa [160 psig] or 121 degrees C [250 degrees F] boilers and expansion tanks?	AFI 32-1068, Para 3.5.7.2. and A2.2.	3,7,8	
21.2.	Are the correct types of inspections being performed according to Attachment 2?	AFI 32-1068, Para A2.2.	3,7,8	
21.3.	Is the most current inspection report posted on or near each boiler requiring an inspection?	AFI 32-1068, Para 3.5.7.7.	3,7,8	
21.4.	Are repairs required by the inspector completed in a timely manner and report of repairs posted with the inspection report?	AFI 32-1068, Para 3.5.7.6. and 3.5.7.7.	3,7,8	
22.	UNFIRED PRESSURE VESSEL INSPECTIONS		3,7,8	
22.1.	Are unfired pressure vessels that meet pressure and volume requirements in figure 1 inspected every 3 years?	AFI 32-1068, Para 3.5.7.4.	3,7,8	
23.	BOILER ATTENDANCE			
23.1.	Has the unit developed a schedule to regularly visit all steam and hot water boiler facilities/plants?	AFI 32-1068, Para 2.4., 3.5.1. and Table 1.	3,7,8	
24.	HEAVY REPAIR			
24.1.	Do you have a Snow and Ice Control Plan?	AFI 32-1002, entire document	3,7,13	
24.2.	Is snow and ice control performed using snow and ice control plan and Air Force Joint Manual (AFJMAN)?	AFI 32-1002, entire document; UFC-3-270-01; UFC-3-270-02, UFC 3-270-03, UFC 3-270-04	3,7,13	
24.3.	Is maintenance and repair work being conducted on airfield pavements, roads, and parking lots and are these requirements being identified, planned, and accomplished according to United States Air Force (USAF) standards (especially airfield pavements)?	UFC-3-270-01, UFC-3-270-02, UFC 3-270-03, UFC 3-270-04	3,7	

Item Number	Item	Reference	Applicability Code	Yes/No
25.	AIRFIELD PAVEMENTS			
25.1.	Does the base maintain background information (historical data showing actions that have affected or altered the airfield pavements features – major repair projects and new construction) necessary for pavement condition surveys, structural evaluations, and friction characteristic evaluations?	AFI 32-1041, Para 2.3, 3.1., and 3.2.	3,7,8	
25.2.	Has the base conducted a Pavement Condition Index (PCI) survey of the airfield pavements within the last 5 years?	AFI 32-1041, Para 2.2.	3,7,8	
25.3.	Has the base conducted a PCI study prior to Air Force Civil Engineer Service Agency (AFCESA) scheduling a structural evaluation (no more than 5 years prior to the evaluation)?	AFI 32-1041, Para 5.1.1.	3,7,8	
25.4.	Are airfield pavements, including obstructions marked according to Air Force (AF) guidance?	AFI 32-1042, Para 2.3.1; ETL 94-01; FAA Circular AC/7460-1	3,7,8	
25.5.	Does the base have pavement-marking requirements identified and scheduled?	AFI 32-1042, Para 2.3.2.	3,7,8	
25.6.	If pavements are not marked according to AF guidance, are waivers for discrepancies current?	AFI 32-1042, Para 2.3.3.	3,7,8	
25.7.	If airfield waivers are in effect, are projects programmed to correct the deficiency?	UFC 3-260-01 Attachment 2	3,7,8	
25.8.	Has the latest Air Traffic System Evaluation (ATSEP) Report been reviewed for airfield and airspace clearance criteria violations and other safety deficiencies? Are waivers (temporary and permanent) documented annually and corrective actions properly programmed?	UFC 3-260-01, Chapter 1-3	3,7,8	
26.	BASE PAVEMENTS			
26.1.	Does the Base Pavements Management Plan include, as a minimum, a pavements classification and inventory, assessment methodology and survey evaluation results, construction and maintenance history and programmed projects and funding estimates?	AFPAM 32-1004 Vol 2, Para 5.1.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
27.	RAILROAD SYSTEMS			
27.1.	Are railroad tracks identified by category and inspected accordingly?	UFC4-860-03F A	3,7,8	
	WATER SYSTEMS			
28.	WATER SUPPLY, TREATMENT, AND DISTRIBUTION SYSTEMS			
28.1.	Privatization. Has the base investigated privatization options to determine if commercial sources can economically supply water?	AFI 32-1061, Para 2.2.	3,*5,7,8,1 3	
28.2.	Does Base Civil Engineer ensure system operations personnel are properly trained and have required certification before assuming plant operations responsibility?	AFI 32-1067, Para 4.3., Section 8, and UFC 3-230-02, Para 3.4.3., 3.4.4.	3,7,8	
28.3.	Does Base Civil Engineer correct system deficiencies identified through internal assessment, monitoring, or inspection by regulatory agencies and keep records of corrective actions?	AFI 32-1067, Para 4.3., Section 8, and UFC 3-230-02, Para 3.5, 3.7	3,7,8	
28.4.	Does Base Civil Engineer maintain facility operating logs, records, drawings, and plant-specific operations and maintenance manuals?	AFI 32-1067, Para 4.3., Section 8, and UFC 3-230-02, Para 3.5. thru 3.5.9.	3,7,8	
28.5.	Do Operations Flight personnel review designs for adequacy and to help minimize excessive operations and maintenance requirements?	AFI 32-1067, Para 6.	3,7,8	
28.6.	Are Fire protection requirements considered in all reviews?	AFI 32-1067, Para 6.	3,7,8	
28.7.	Does the installation operate and maintain water treatment facilities according to MIL-HDBK 1164, <i>Operations and Maintenance of Water Supply Systems</i> and AFI 32-1067, <i>Water Systems</i> ?	UFC 3-230-02	3,7,8	
28.8.	Does the installation use manufacture's operations and maintenance manuals for specific treatment components?	UFC 3-230-02	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
28.9.	Does the installation disinfect and fluoridate water supplies when necessary to comply with federal, state, and local requirements?	UFC 3-230-02	3,7,8	
28.10.	If the water requires more than minor treatment, do operators prepare AF IMT 1460, Water Utility Operating Log (Supplemental) ?	AFI 32-1067, Para 10.1.1.1.	3,7,8	
28.11.	Is AF IMT 997, Daily Well Activity Record , used to record operations and maintenance information for wells and pumping stations?	AFI 32-1067, Para 10.1.1.2.	3,7,8	
28.12.	Is well data available for each well beginning with initial construction and updated as repairs, redevelopment, or performance test are accomplished?	AFI 32-1067, Para 10.2. and UFC 3-230-02 Para 4.5.5.	3,7,8	
28.13.	Has an effective maintenance plan been developed to include a recurring work schedule, maintenance histories for each major piece of equipment, essential spare parts lists, and a long range maintenance and improvement plan?	AFI 32-1067, Para 10.3.	3,7,8	
28.14.	Are maintenance records being maintained?	AFI 32-1067, Para 10.3.	3,7,8	
28.15.	Are water mains being flushed and disinfected whenever opened for repair?	UFC 3-230-02, Para 7.3.2.2. and AWWA Std. C651-92	3,7,8	
28.16.	Are dead-end pipes being flushed at least annually?	UFC 3-230-02, Para 7.3.2.2. and AWWA Std. C651-92	3,7,8	
28.17.	Has a valve inspection and maintenance program been established to ensure valves and valve boxes are being maintained on a recurring schedule?	UFC 3-230-02, Para 8.3.2. and Table 25	3,7,8	
28.18.	Has a hydrant maintenance program been established to ensure hydrants are inspected at least every two years?	UFC 3-230-02, Para 8.4., Table 26 and UFC 3-600-02, Para 2-2.11.	3,7,8	
28.19.	Are hydrants flow tested at least every 5 years?	UFC 3-600-02, Para 2-2.11.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
29.	BACKFLOW PREVENTION PROGRAM MANAGEMENT			
29.1.	Has the BCE appointed a Backflow Program Manager and is he or she familiar with and have a current copy of the Uniform Plumbing Code (UPC) and Training Manual?	AFI 32-1066, Para 6.	3,7,8	
29.2.	Does the Chief of Operations ensure backflow prevention technicians inspect, test, repair, or replace plumbing systems and fixtures in accordance with AFI 32-1066, <i>Plumbing Systems</i> , UPC and the Illustrated Training Manual?	AFI 32-1066, Para 7.	3,7,8	
29.3.	Does the Backflow Program Manager maintain an aggressive program to identify, isolate, record, and correct cross-connections and other potential sources of distribution system contamination?	AFI 32-1066, Para 8.	3,7,8	
29.4.	Does the Backflow Program Manager ensure plumbing personnel can properly test, install, maintain, and repair backflow prevention devices?	AFI 32-1066, Para 8.	3,7,8	
29.5.	Does the Backflow Program Manager conduct facility surveys of plumbing devices and systems (excluding military family housing unless underground sprinkler systems are installed) every 5 years and update records?	AFI 32-1066, Para 8.	3,7,8	
29.6.	Does the Backflow Program Manager coordinated surveys with the base Bioenvironmental Engineering Services personnel?	AFI 32-1066, Para 8.	3,7,8	
29.7.	Does the Backflow Program Manager identify and forecast training backflow prevention training requirements for Base Civil Engineering personnel?	AFI 32-1066, Para 8.	3,7,8	
29.8.	Does the Backflow Program Manager review all plans and drawings of new or modified water systems to identify potential cross-connections and verify control devices are specified?	AFI 32-1066, Para 8.	3,7,8	
29.9.	Do base Bioenvironmental Engineering Services personnel assign a degree of hazard to each cross-connection using the UPC?	AFI 32-1066, Para 9.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
29.10.	Do base Bioenvironmental Engineering Services personnel review plans for water system modifications to prevent cross-connection and to identify existing cross-connections or other potential sources of contamination or pollution and recommend corrective action?	AFI 32-1066, Para 9.	3,7,8	
29.11.	Do Base Civil Engineering plumbers (utility personnel) and the base bioenvironmental engineer survey all facilities and water-using equipment and systems every 5 years to determine potential or existing cross-connections and the degree of hazard?	AFI 32-1066, Para 12. and AFI 48-119, Para 9.6.3.6.	3,7,8	
29.12.	Are the results of the facility surveys recorded on AF IMT 848, Inventory of Cross-Connection Control and Backflow Prevention Devices ?	AFI 32-1066, Para 12.2. and AFI 48-119, Para 9.6.3.6.	3,7,8	
29.13.	Does the Backflow Program Manager centrally maintain inspection records and the status of installation and upgrade actions?	AFI 32-1066, Para 12.2. and AFI 48-119, Para 9.6.3.6.	3,7,8	
29.14.	Does a control number individually identify all existing backflow protective devices?	AFI 32-1066, Para 12.5. and AFI 48-119, Para 9.6.3.6.	3,7,8	
29.15.	Has the backflow manager/supervisor established a schedule for testing and inspecting all backflow protection devices, including air gaps?	AFI 32-1066, Para 13.	3,7,8	
29.16.	Are certified technicians performing the tests and inspections?	AFI 32-1066, Para 13.	3,7,8	
29.17.	Is the testing and inspection schedule set up based on age, condition, and the degree of hazard for each device?	AFI 32-1066, Para 13	3,7,8	
29.18.	Is the inspection and testing schedule a part of the recurring work program?	AFI 32-1066, Para 13.	3,7,8	
29.19.	Does the inspector record data on all cross-connections on AF IMT 845, Cross-Connection Information , or an approved computerized version?	AFI 32-1066, Para 13.3. and 13.4.	3,7,8	
29.20.	Does the inspector fill out the appropriate form for the type of device (AF IMT 843, Backflow Prevention Inspection Data ; or AF IMT 844, Backflow Prevention Inspection Data)?	AFI 32-1066, Para 13.3.2. and 13.4.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
29.21.	Are cross-connection control and backflow prevention device records maintained at a central location?	AFI 32-1066, Para 13.4.	3,7,8	
29.22.	Does the Chief of Operations provide the MAJCOM a list of currently assigned certified technicians, and update it as changes occur?	AFI 32-1066, Para 16.3.	3,7,8	
30.	SANITARY SEWER SYSTEM MAINTENANCE			
30.1.	Has a routine maintenance program been established to ensure the effective operation of grease traps?	MIL-HDBK 1138, Section 4	3,7,8	
30.2.	Has a routine service and maintenance program been established to ensure the effective operation of oil/water separators?	MIL-HDBK 1138, Section 5	3,7,8	
30.3.	Does Base Civil Engineering ensure system operations personnel are properly trained and have required certification before assuming plant operations responsibility?	AFI 32-1067, Para 4.3. and 8. thru 8.3.	3,7,8	
30.4.	Do operators prepare AF IMT 1462, Water Pollution Control Utility Operating Log , as required?	AFI 32-1067, Para 10.1.2.	3,7,8	
31.	NATURAL GAS DISTRIBUTION SYSTEMS			
31.1.	Are craftsmen trained to maintain natural gas system operations and training annotated and up-to-date?	US DoT Manual, Aug 1997, Chapter 1	3,7,8	
31.2.	Are written procedures in place to minimize hazards resulting from natural gas emergencies?	US DoT Manual, Aug 1997, Chapter 1	3,7,8	
31.3.	Is overpressure protection in the form of pressure relief, monitoring, or automatic shutoff devices available and properly installed throughout the system?	US DoT Manual, Aug 1997, Chapter 2	3,7,8	
31.4.	Have operators established procedures to implement and maintain a corrosion control program for their piping system? These procedures should include design, installation, operation, and maintenance activities on a cathodic protection system. A person qualified in pipeline corrosion control methods must carry out these procedures.	US DoT Manual, Aug 1997, Chapter 3	3,7,8	
31.5.	Are rectifiers inspected six times every year at intervals not exceeding 2 ½ months, to ensure that the rectifier(s) is properly operating?	US DoT Manual, Aug 1997, Chapter 3	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
31.6.	Are rectifier records maintained according to DoT Form 15, Corrosion Control-Rectifier Inspection ?	US DoT Manual, Aug 1997, Chapter 3	3,7,8	
31.7.	Does each pipeline under cathodic protection have sufficient test points for electrical measurement to determine the adequacy of cathodic protection?	US DoT Manual, Aug 1997, Chapter 3	3,7,8	
31.8.	Are records and maps of cathodic protection system tests, surveys, or inspections maintained?	US DoT Manual, Aug 1997, Chapter 3	3,7,8	
31.9.	Are meter installation areas clear for easy access for readings and repair?	US DoT Manual, Aug 1997, Chapter 3	3,7,8	
31.10.	Leak survey technicians must be fully trained, certified and have all credentials up-to-date. No matter if it is in-house personnel or contract.	US DoT Manual, Aug 1997, Chapter 4	3,7,8	
31.11.	Are Leak Classification and Action Criteria being followed?	US DoT Manual, Aug 1997, Chapter 4	3,7,8	
31.12.	Are follow-up inspections completed within 24 to 48 hours, but in no case later than 1 month following the repair and annotated in operations and maintenance manual?	US DoT Manual, Aug 1997, Chapter 4	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
31.13.	<p>Has a natural gas systems operations and maintenance plan been developed? The operations and maintenance plan must be written and followed to help the operator comply with the pipeline safety regulations. Operations and Maintenance Plans must contain the following components:</p> <ul style="list-style-type: none"> > Emergency response activities > Determination of system class by location(s) > Public Education material and activities > Investigation of Failures > Maximum Allowable Operating Pressure (MAOP) > Tapping and/or Purging of Pipeline activities > Odorization - (Master meter operators) > Odorization - (Other than master meter operators) > Patrolling > Leak Surveys > Line Markers > Leak classifications > Testing for Reinstating a Service Line > Abandonment of Facilities > Key Valve Maintenance > Accidental Ignition of Gas > Corrosion Protection from atmospheric, galvanic, and/or chemical > Construction And Leak Repair > Construction Records, Maps And Operating History > Gathering of Data Needed for Reporting Incidents > Starting Up and Shutting Down Any Part of the > Pipeline > Upgrading > List personnel inspecting testing, and repairing regulator stations with their qualifications, to include in-house or service contract personnel > Inspection of Regulating Stations > Testing of Relief Devices at Regulating Stations > Actions taken for repair of regulating stations > Gas piping maps with types and sizes indicated > Meter calibration records 	<p>US DoT Manual, <u>Operators of Small Natural Gas Systems</u>, Aug 1997, and 49 CFR 192-603</p>	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
31.14.	Is the Operations and Maintenance manual updated as operations occur, reviewed and corrected as needed? Is the manual kept at a location where operations and maintenance activities are conducted so annotation can be made immediately?	US DoT Manual, Aug 1997, Chapter 8 and 49 CFR Part 192.605	3,7,8	
32.	PEST MANAGEMENT			
32.1.	Has an Air Force Installation Pest Control Supervisor been appointed?	AFI 32-1053, Para 3.4.	3,7,8	
32.2.	Are restricted use pesticides applied by only certified personnel, or uncertified, but trained personnel that are under the direct supervision of a certified application?	AFI 32-1053, Para 3.4.3.1.	3,7,8	
32.3.	Do certified pest management personnel who have met the requirements for certification possess current DD Forms 1826, Pest Control Certificate of Competency and DD Forms 1826-1, Pesticide Applicator (valid three years from certification date, unless revoked for cause)?	AFI 32-1053, Para 3.3.3.	3,7,8	
32.4.	Are pesticides applied according to guidance in DoD Directive 4150.7, <i>DoD Pest Management Program</i> ?	AFI 32-1053, Para 3.4.3.1.	3,7,8	
32.5.	Has the MAJCOM Pest Management Consultant (PMC) reviewed the installation pest management plan annually for adherence to DOD and AF policy?	AFI 32-1053, Para 3.3.2.	3,7,8	
32.6.	Is the installation using the Integrated Pest Management Information System (IPMIS) pesticide database and forwarding (at least monthly) the consolidated pest management data?	AFI 32-1053, Para 3.3.4.	3,7,8	
32.7.	Are all Statements of Work (SOW), Performance Work Statements (PWS) or Performance Requirements Documents (PRD) for contracting pest management services been reviewed and approved by the MAJCOM?	AFI 32-1053, Para 4.7.2.	3,7,8	
32.8.	Have installation personnel received MAJCOM approval before a request is made for procurement (to include Government Purchase Card (GPC), AF IMT 9, Request for Purchase)?	AFI 32-1053, Para 4.7.2.	3,7,8	
32.9.	Does BCE's contract management office personnel work with the installation contracting office to ensure all prospective contractors have proof of current state certifications for the types of operations in the contract?	AFI 32-1053, Para 4.7.3.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
32.10.	Are pesticides applied according to guidance in DoD Directive 4150.7?	AFI 32-1053, Para 3.4.3.1.	3,7,8	
33.	ROOF SYSTEM MANAGEMENT			
33.1.	Does the Operations Flight schedule personnel to attend roofing courses?	AFI 32-1051, Para 3.3.1.	3,7,8	
33.2.	Does the Operations Flight monitor roof inspections, maintenance and repair work covered by performance agreements, and warranties for compliance?	AFI 32-1051, Para 3.3.1.	3,7,8	
33.3.	Does the Operations Flight ensure all contracted work becomes a part of the facility file?	AFI 32-1051, Para 3.3.1.	3,7,8	
33.4.	Does the Operations Flight decide whether roof repair work and maintenance will be done under contract or in-house?	AFI 32-1051, Para 3.3.1.	3,7,8	
33.5.	Does the Roof Engineer manage the base roofing program?	AFI 32-1051, Para 3.3.1.1., 6., and 9.	3,7,8	
33.6.	Does the Roof Engineer monitor contract work?	AFI 32-1051, Para 3.3.1.1, 6, and 9	3,7,8	
33.7.	Does the Roof Engineer develop and maintain low-slope roof lists by generic type?	AFI 32-1051, Para 3.3.1.1., 6., and 9.	3,7,8	
33.8.	Does the Roof Engineer color code the roof lists with the Base Comprehensive Plan Drawing?	AFI 32-1051, Para 3.3.1.1., 6., and 9.	3,7,8	
33.9.	Does the Roof Engineer maintain a list of roofs, by priority, that need replacing?	AFI 32-1051, Para 3.3.1.1., 6., and 9.	3,7,8	
33.10.	Does the Roof Engineer determine the most technically feasible and economical repair alternatives (recover, slope conversion, or replacement)?	AFI 32-1051, Para 3.3.1.1., 6., and 9.	3,7,8	
33.11.	Does the Roof Engineer have a facility list of all base low-slope roofs, divided into three condition categories: red, yellow, and green?	AFI 32-1051, Para 6.	3,7,8	
33.12.	Does the Roof Engineer have a list of each roof on the real property base classified by category red, yellow, or green (to include MFH and auxiliary sites)?	AFI 32-1051, Para 9.	3,7,8	

Item Number	Item	Reference	Applicability Code	Yes/No
33.13.	Does the Roof Engineer are as-built roof summary sheets and applicable manufacturer warranties included in the facility file before project closeout?	AFI 32-1051, Para 20.	3,7,8	
33.14.	Do Roof Technicians develop and maintain the roof database?	AFI 32-1051, Para 3.3.1.2.	3,7,8	
33.15.	Do Roof Technicians administer the roof inspection program?	AFI 32-1051, Para 3.3.1.2.	3,7,8	
33.16.	Do Roof Technicians manage in-house maintenance and repair work?	AFI 32-1051, Para 3.3.1.2.	3,7,8	
33.17.	Do Roof Technicians order needed repair tools and equipment, and maintain equipment in the inventory?	AFI 32-1051, Para 3.3.1.2.	3,7,8	
33.18.	Do Roof Technicians perform safety inspections on low-slope red category roofs at least annually?	AFI 32-1051, Para 11.1.	3,7,8	
33.19.	Do Roof Technicians perform inspections on all yellow category roofs according to the warranty, guarantee, or performance agreement, but not less than annually?	AFI 32-1051, Para 11.2.	3,7,8	
33.20.	Do Roof Technicians perform detailed inspections on all low-sloped green category roofs in early spring using the Roofing Industry Educational Institute Maintenance Inspection Checklist?	AFI 32-1051, Para 11.3.	3,7,8	

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Director of Civil Engineer

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

42 U.S.C., Section 7414 (a) (1), *Recordkeeping, Inspections, Monitoring and Entry*
Executive Order (EO) 13 123, *Greening the Government Through Efficient Energy Management*
FAA Circular AC 70/7460-1, *Obstruction Marking and Lighting*
US DoT Manual, *Operators of Small Natural Gas Systems*, 1997
DoDR 4145.19R-1, *Storage and Materials Handling*
DODI 4150.7, *DoD Pest Management Program*
DoD EPA 1995, *Universal Certification Program Workbook*
AFPD 23-3, *Energy Management*
AFI 24-301, *Vehicle Operations*
AFPD-32-10, *Installations and Facilities*
AFI 32-1001, *Operations Management*
AFI 32-1002, *Snow and Ice Control*
AFI 32-1022, *Planning and Programming Nonappropriated Fund Facility Construction Projects*
AFPAM 32-1004 Volume 1, *Working in the Operations Flight - Functions and Organization*
AFPAM 32-1004 Volume 2, *Working in the Operations Flight - Maintenance Engineering*
AFPAM 32-1004 Volume 3, *Working in the Operations Flight - Facility Management*
AFPAM 32-1004 Volume 4, *Working in the Operations Flight -Material Acquisition*
AFI 32-1041, *Airfield Pavement Evaluation Program*
AFI 32-1042, *Standards for Marking Air Fields*
AFI 32-1043, *Managing, Operating, and Maintaining Aircraft Arresting Systems and the USAFE Supplement 1*
AFI 32-1044, *Visual Air Navigation Systems*
AFI 32-1051, *Roof Systems Management*
AFI 32-1053, *Pest Management Program*
AFI 32-1054, *Corrosion Control*
AFI 32-1061, *Providing Utilities to U.S. Air Force Installations*
AFI 32-1062, *Electrical Power Plants and Generators*
AFI 32-1063, *Electric Power Systems*
AFI 32-1064, *Electrical Safe Practices and the USAFE Supplement 1*

AFI 32-1065, *Grounding Systems*, and the USAFE Supplement 1

AFI 32-1066, *Plumbing Systems*

AFI 32-1067, *Water Systems*

AFI 32-1068, *Heating Systems and Unified Pressure Vessels*

AFPAM 32-1098, *Base Civil Engineer Self-Help Guide*

AFI 32-6004, *Furnishings Management*

AFI 32-7086, *Hazardous Materials Management*

AFI 33-360 Volume 1, *Air Force Content Management Program - Publications*

AFI 36-2201 Volume 3, *Air Force Training Program on the Job Training Administration*

AFMAN 37-123, *Management of Records*

AFI 48-119, *Medical Service Environmental Quality*

AFI 90-201, *Inspector General Activities*, and the USAFE Supplement 1

AFMAN 91-201, *Explosives Safety Standards*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection and Health (AFOSH) Program*

T.O. 33K-1-100-CD-1, *Technical Manual TMDE Calibration Interval Technical Order and Work Unit Code Reference Guide*

T.O. 37-1-1, *General Operations and Inspections of Installed Fuel Storage and Dispensing Systems*

AFOSH STD 48-1, *Aerospace Medical Program*

AFOSH STD 91-10, *Civil Engineering*

AFOSH STD 91-25, *Confined Spaces*

AFOSH STD 91-501, *Air Force Consolidated Occupational Safety Standards*

USAFEI 32-1003, *Maintenance and Operations of Intrusion Detection Systems*

AFEPPM 96-3, *Defense Utility Energy Reporting System*

Air Force Refrigerant Management Program Handbook

API STD 570, *Piping Inspection Code: Inspecting, Repair, Alteration, and Rerating of In-service Piping System*

API STD 653, *Tank Inspection Repair, Alteration, and Reconstruction*

AWWA STD C651-92, *Disinfecting Water Mains*

CFR 40-280, *Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks*

CFR 40-281, *Approval of State Underground Storage Tank Programs*

ETL 04-2, *Standard Airfield Pavement Marking Schemes*

ETL 94-01, *Airfield Pavement Markings*

ETL 94-4, *Energy Usage Criteria for Facilities in the Military Construction Program*

MIL HDBK 419, *Grounding, Bonding and Shielding for Electronic Equipments and Facilities*

MIL HDBK 1022A, *Petroleum Fuel Facilities*

MIL HDBK 1023/4, *Maintenance of Visual Air Navigation Facilities*

MIL HDBK 1138, *Wastewater Treatment System Operations and Maintenance*

MIL HDBK 1164, *Operations and Maintenance of Water Supply Systems*

MIL HDBK 1190B, *Facility Planning and Design Guide*

NATO 7th Edition, *Criteria and Standards*

NATO STANAG 3609, *Standards for Maintenance of Fixed Aviation Fuel Receipt, Storage and Dispensing Systems*

NFPA 70, *National Electric Code*

NFPA 780, *Standards of the Installation of Lightning Protection Systems*

UFC 3-130-03, *Arctic and Subarctic Construction - Runway and Road Design*

UFC 3-230-02, *Operations and Maintenance: Water Supply Systems*

UFC 3-260-01, *Operations and Maintenance: Pavement Design for Airfields*

UFC 3-270-01, *Operations and Maintenance: Asphalt Maintenance and Repair*

UFC 3-270-02, *Operations and Maintenance: Asphalt Crack Repair*

UFC 3-270-03, *Operations and Maintenance: Concrete Crack and Partial Depth Repair*

UFC 3-270-04, *Operations and Maintenance: Concrete Repair*

UFC 3-460-03, *Operations and Maintenance: Maintenance of Petroleum Systems*

UCF 3-600-02, *Operations and Maintenance: Inspection, Testing and Maintenance of Fire Protection Systems*

UFC 4-860-03FA, *Design: Railroad Track Standards*

10 CRF Part 435, *Energy Performance Standards*

49 CFR 192-603, *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*

49 CFR 192.605, *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*

Abbreviations and Acronyms

AAS—Aircraft Arresting System

AB—Air Base

ABS—Air Base Squadron

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFOSH—Air Force Occupational and Environmental Safety, Fire Protection, and Health Program

AFTO—Air Force Technical Order

API STD—American Petroleum Institute Standards

BCE—Base Civil Engineer

BES—Bioenvironmental Engineering Service

BOM—Bill of Material

CA/CRL—Custodian Authorization/Custody Receipt Listing

CCGI—Core Compliance Guide Item

CDC—Career Development Courses

CE—Civil Engineer

CEMAS—Civil Engineer Material Acquisition System

CGI—Compliance Guide Item

DoD—Department of Defense

DUERS—Defense Utility Energy Reporting System

EAID—Equipment Authorization Inventory Data/Document

EMSG—Energy Management Steering Group

EO—Executive Order

EPS—Engineered Performance Standards

FAA—Federal Aviation Administration

HVAC—Heating, Ventilation and Air Conditioning

IG—Inspector General

JSIIDS—Joint Services Interior Intrusion Detection System

LFM—Liquid Fuels Maintenance

LPS—Lightning Protection System

MAJCOM—Major Command

MFH—Military Family Housing

NATO—North Atlantic Treaty Organization

NEC—National Electric Code

O&M—Operation and Maintenance

PCI—Pavement Condition Index

RPIE—Real Property Installed Equipment

RWP—Recurring Work Program

TES—Tank Entry Supervisor

T.O.—Technical Order

UPC—Uniform Plumbing Code

USAF—United States Air Force

USAFE—United States Air Forces in Europe